

*OK to cancel  
w/2 claims*

Please amend the application as follows:

In the Claims:

1. (Presently Amended) ~~A purified and~~ An isolated and purified polynucleotide selected from the group consisting of:

(a) a polynucleotide encoding a polypeptide having ~~an~~ the amino acid sequence of SEQ ID NO: 2, and

(b) a polynucleotide which is fully complementary to the polynucleotide of (a),

2. (Presently Cancelled) The polynucleotide of claim 1 wherein the polynucleotide comprises nucleotides selected from the group consisting of natural, non-natural and modified nucleotides.

3. (Presently Cancelled) The polynucleotide of claim 1 wherein the internucleotide linkages are selected from the group consisting of natural and non-natural linkages.

4. (Presently Amended) The polynucleotide of claim 1 wherein the polynucleotide encoding a polypeptide having ~~an~~ the amino acid sequence of SEQ ID NO: 2 comprises the nucleotide sequence of SEQ ID NO: 1.

5. (Previously Amended) An isolated and purified polynucleotide that is an expression vector comprising a polynucleotide of claim 1.

6. (Presently Amended) A host cell comprising ~~a~~ the heterologous expression vector of claim 5.

7. (Presently Amended) A process for expressing a polypeptide having the amino acid sequence of SEQ ID NO: 2 ~~MurD protein of Pseudomonas aeruginosa~~ in a recombinant host cell, comprising:

(a) transforming a ~~suitable~~ host cell with an expression vector of claim ~~5~~ 3; and,

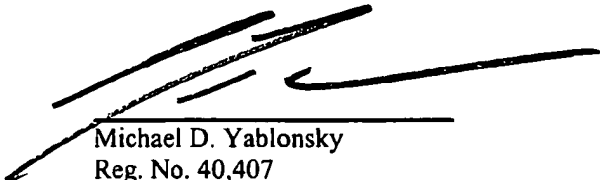
(b) culturing the host cell of step (a) in conditions under which allow expression of said ~~the MurD protein~~ polypeptide from said expression vector.

claimed in this application is far outside the commonly accepted definition of "mutant." Indeed, Applicant is not aware of any use of the terms "mutant" or "natural mutant" to describe the relationship between related gene from different genera of bacteria. Such usage is believed to be wrong.

Therefore, the Examiner's position is wrong and the polynucleotides and polypeptides of this invention are a unifying special technical feature as between Groups I and II and the methods of using those sequences expressed in the claims of Group III.

Applicant respectfully requests withdrawal of the requirement for restriction as between Groups I - III, Claims 1-11.

Respectfully submitted,



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8. (Withdrawn) A purified and isolated polypeptide having an amino acid sequence selected from the group consisting of

- (a) a polypeptide having an amino acid sequence of SEQ ID NO: 2,
- (b) a polypeptide that is a naturally occurring mutant or polymorphic form of (a).

9. (Withdrawn) A method of determining whether a candidate compound is an inhibitor of a *Pseudomonas aeruginosa* MurD polypeptide comprising:

- (a) providing at least one host cell harboring an expression vector that includes a polynucleotide selected from the group consisting of:
  - (i) a polynucleotide encoding a polypeptide having an amino acid sequence of SEQ ID NO: 2;
  - (ii) a polynucleotide which is complementary to the polynucleotide of (i),
  - (iii) a polynucleotide representing a naturally occurring mutant or polymorphic form of (i), and
- (b) contacting at least one of said cells with the candidate to permit the interaction of the candidate with the MurD polypeptide, and
- (c) determining whether the candidate is an inhibitor of the MurD polypeptide by ascertaining the relative activity of the polypeptide in the presence of the candidate.

10. (Withdrawn) The method of claim 9 wherein the polynucleotide has the nucleotide sequence of SEQ ID NO: 1.

11. (Withdrawn) The method of claim 9 wherein in step (c) the relative activity is determined by comparing a measurement of MurD polypeptide activity of at least one cell before step (b) to a measurement of MurD polypeptide activity of at least one cell after step (b).

12. (Withdrawn) A compound that is an inhibitor of a polypeptide having an amino acid sequence selected from the group consisting of

- (a) a polypeptide having an amino acid sequence of SEQ ID NO: 2,
- (b) a polypeptide that is a naturally occurring mutant or polymorphic form of (a).

13. (Withdrawn) A pharmaceutical composition comprising a pharmaceutically acceptable carrier and an inhibitor of a polypeptide having an amino acid sequence selected from the group consisting of

- (a) a polypeptide having an amino acid sequence of SEQ ID NO: 2,
- (b) a polypeptide that is a naturally occurring mutant or polymorphic form of (a).

14. (Withdrawn) A method of treatment of a patient in need of prophylactic or therapeutic treatment for a bacterial infection comprising administering to the patient an effective amount of an inhibitor of a polypeptide having an amino acid sequence selected from the group consisting of

- (a) a polypeptide having an amino acid sequence of SEQ ID NO: 2,
- (b) a polypeptide representing a naturally occurring mutant or polymorphic form of (a).